

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Jeffrey R. Jobs and Thomas A. Stenglein
Attorney Docket No.: 33585/US
Filed : March 8, 2004
Title : MEMORY HUB ARCHITECTURE HAVING PROGRAMMABLE LANE WIDTHS

INFORMATION DISCLOSURE STATEMENT

MAIL STOP PATENT APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. §§ 1.56 and 1.97 through 1.98, applicants wish to make known to the Patent and Trademark Office the references set forth on the attached form PTO-1449. Copies of the cited non-patent literature references, as required under 37 C.F.R. § 1.98(a)(2), are enclosed. Copies of the cited U.S. patents and U.S. patent application publications will not be submitted herewith in accordance with the waiver by the Office of the requirement under 37 C.F.R. § 1.98(a)(2)(i) for U.S. national patent applications filed after June 30, 2003. Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are aware of which is believed relevant to the examination of the above-identified application, applicants believe that his invention is patentable.

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 09/994,516, describing and claiming subject matter that is similar to the subject matter of this application, was filed on November 26, 2001. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/165,787, describing and claiming subject matter that is similar to the subject matter of this application, was filed on June 7, 2002. This related application, as well as

any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/215,505, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 9, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/211,036, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 2, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/601,222, describing and claiming subject matter that is similar to the subject matter of this application, was filed on June 20, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/213,038, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 5, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/601,104, describing and claiming subject matter that is similar to the subject matter of this application, was filed on June 19, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/238,322, describing and claiming subject matter that is similar to the

subject matter of this application, was filed on September 9, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/232,842, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 29, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/601,253, describing and claiming subject matter that is similar to the subject matter of this application, was filed on June 20, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/232,473, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 29, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/601,252, describing and claiming subject matter that is similar to the subject matter of this application, was filed on June 20, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/222,415, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 16, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/222,393, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 16, 2002. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/690,810, describing and claiming subject matter that is similar to the subject matter of this application, was filed on October 20, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/645,288, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 20, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/644,522, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 19, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/660,844, describing and claiming subject matter that is similar to the subject matter of this application, was filed on September 12, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/651,801, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 28, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/665,904, describing and claiming subject matter that is similar to the subject matter of this application, was filed on September 18, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/653,044, describing and claiming subject matter that is similar to the subject matter of this application, was filed on August 28, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/695,383, describing and claiming subject matter that is similar to the subject matter of this application, was filed on October 27, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Applicants also wish to make known to the Patent and Trademark Office that an application, Serial No. 10/460,588, describing and claiming subject matter that is similar to the subject matter of this application, was filed on June 11, 2003. This related application, as well as any prior art cited therein, may be material to the examination of this application. A copy of this related application as filed is submitted herewith in accordance with 37 C.F.R. § 1.98(d).

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Respectfully submitted,

DORSEY & WHITNEY LLP

A handwritten signature in cursive script, reading "Edward W. Bulchis".

Edward W. Bulchis

Registration No. 26,847

EWB:dms

Enclosures:

Postcard
Form PTO-1449
Cited References (2)
Copies of Related Applications (23)

1420 Fifth Avenue, Suite 3400
Seattle, WA 98101
Telephone (206) 903-8800
Facsimile (206) 903-8820

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FORM PTO-1449 (REV.7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 33585/US	APPLICATION NO. Not yet assigned
INFORMATION DISCLOSURE STATEMENT <i>(Use several sheets if necessary)</i>		APPLICANT(S) Jeffrey R. Jobs et al.	
		FILING DATE Concurrently herewith	GROUP ART UNIT Not yet assigned

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,251,303	10/05/93	Fogg, Jr. et al.	395	275	
	AB	5,432,907	07/11/95	Picazo, Jr. et al.	395	200	
	AC	5,442,770	08/15/95	Barratt	395	403	
	AD	5,497,476	03/05/96	Oldfield et al.	395	439	
	AE	5,659,798	08/19/97	Blumrich et al.	395	846	
	AF	5,818,844	10/06/98	Singh et al.	370	463	
	AG	5,875,352	02/23/99	Gentry et al.	395	843	
	AH	6,061,263	05/09/00	Boaz et al.	365	51	
	AI	6,067,262	05/23/00	Irrinki et al.	365	201	
	AJ	6,073,190	06/06/00	Rooney	710	56	
	AK	6,105,075	08/15/00	Ghaffari	710	5	
	AL	6,137,709	10/24/00	Boaz et al.	365	51	
	AM	6,144,587	11/07/00	Yoshida	365	189.05	
	AN	6,167,465	12/26/00	Parvin et al.	710	22	
	AO	6,167,486	12/26/00	Lee et al.	711	120	
	AP	6,201,724 B1	03/13/01	Ishizaki et al.	365	49	
	AQ	6,233,376 B1	05/15/01	Updegrove	385	14	
	AR	6,243,769 B1	06/05/01	Rooney	710	56	
	AS	6,246,618 B1	06/12/01	Yamamoto et al.	365	200	
	AT	6,272,609 B1	08/07/01	Jeddeloh	711	169	
	AU	6,285,349 B1	09/04/01	Smith	345	147	
	AV	6,301,637 B1	10/09/01	Krull et al.	711	112	
	AW	6,327,642 B1	12/04/01	Lee et al.	711	120	
	AX	6,330,205 B2	12/11/01	Shimizu et al.	365	230.06	
	AY	6,347,055 B1	02/12/02	Motomura	365	189.05	

EXAMINER

DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

FORM PTO-1449 (REV.7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 33585/US	APPLICATION NO. Not yet assigned
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		FILING DATE Concurrently herewith	GROUP ART UNIT Not yet assigned

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AZ	6,349,363 B2	02/19/02	Cai et al.	711	129	
	BA	6,356,573 B1	03/12/02	Jonsson et al.	372	46	
	BB	6,367,074 B1	04/02/02	Bates et al.	717	11	
	BC	6,373,777 B1	04/16/02	Suzuki	365	230.03	
	BD	6,381,190 B1	04/30/02	Shinkai	365	230.03	
	BE	6,421,744 B1	07/16/02	Morrison et al.	710	22	
	BF	6,434,639 B1	08/13/02	Haghighi	710	39	
	BG	6,462,978 B2	10/08/02	Shibata et al.	365	63	
	BH	6,463,059 B1	10/08/02	Movshovich et al.	370	389	
	BI	6,470,422 B2	10/22/02	Cai et al.	711	129	
	BJ	6,473,828 B1	10/29/02	Matsui	711	104	
	BK	6,477,592 B1	11/05/02	Chen et al.	710	52	
	BL	6,477,614 B1	11/05/02	Leddige et al.	711	5	
	BM	6,477,621 B1	11/05/02	Lee et al.	711	120	
	BN	6,496,909 B1	12/17/02	Schimmel	711	163	
	BO	6,505,287 B2	01/07/03	Uematsu	711	170	
	BP	6,523,092 B1	02/18/03	Fanning	711	134	
	BQ	6,523,093 B1	02/18/03	Bogin et al.	711	137	
	BR	6,539,490 B1	03/25/03	Forbes et al.	713	401	
	BS	6,552,564 B1	04/22/03	Forbes et al.	326	30	
	BT	6,587,912 B2	07/01/03	Leddige et al.	711	5	
	BU	6,590,816 B2	07/08/03	Perner	365	200	
	BV	6,594,713 B1	07/15/03	Fuoco et al.	710	31	
	BW	6,622,227 B2	09/16/03	Zumkehr et al.	711	167	

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BX	6,631,440 B2	10/07/03	Jenne et al.	711	105	
	BY	2002/0112119 A1	08/15/02	Halbert et al.	711	115	
	BZ	2002/0144064 A1	10/03/02	Fanning	711	144	
	CA	2003/0005223 A1	01/02/03	Coulson et al.	711	118	
	CB	2003/0043426 A1	03/06/03	Baker et al.	359	109	
	CC	2003/0229770 A1	12/11/03	Jeddeloh	711	213	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	CD							
	CE							
	CF							

OTHER PRIOR ART *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	CG	Intel, "Intel 840 Chipset: 82840 Memory Controller Hub (MCH)", Datasheet, October 1999, pp. 1-178.
	CH	Micron Technology, Inc., "Synchronous DRAM Module 512MB/1GB (x72, ECC) 168-PIN Registered FBGA SDRAM DIMM", Micron Technology, Inc., 2002, pp. 1-23.
	CI	
	CJ	
	CK	
	CL	

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